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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Chen, Zhijian J.
Application No.: N/A Group No.: Not Yet Assigned
Filed: March 26, 2004 Examiner: Not Yet Assigned
For: KINASE CAPABLE OF SITE-SPECIFIC PHOSPHORYLATION OF IKB-A

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

IDENTIFICATION OF TIME OF FILING THE ACCOMPANYING
INFORMATION DISCLOSURE STATEMENT

1. The information disclosure statement submitted herewith is being filed:
(☒) Within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. 37 C.F.R. section 1.97(b).

OR

() *After* three months of the filing date of this national application or the date of entry of the national stage as set forth in Section 1.491 in an international application or after the mailing date of the first Office action on the merits, whichever event occurred last but *before* the mailing date of either:

- (1) a final action under Section 1.113,
(2) a notice of allowance under Section 1.311, or

CERTIFICATION UNDER 37 C.F.R. SECTIONS 1.8(a) and 1.10*

I hereby certify that, on the date shown below, this correspondence is being:

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Practitioner's Docket No. MPI96-031CP1DV1CPACN2M

(3) an action that otherwise closes prosecution in the application

whichever occurs first.

☐ Accompanying this transmittal is the fee set forth in 37 C.F.R. Section 1.17(p) for submission of an information disclosure statement under Section 1.97(c). (\$180.00).

☐ Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. 37 C.F.R. Section 1.97(e)(1).

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FEE PAYMENT

2. ☐ The fee due is set forth in 37 C.F.R. Section 1.17(p) for submission of an information disclosure statement under Section 1.97(c) (\$180.00).

☒ Applicant believes no fee is due in connection with this submission.

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METHOD OF PAYMENT OF FEE

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☐ Charge Account No. 501668 in the amount of \$0.00 .
☐ A duplicate of this request is attached.

If any additional fees are due, please charge Account 501668.

March 26, 2004

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INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

1. ☒ Preliminary Statements;
2. ☒ Copies of Subt. Form PTO-1449 (6 pages) cited in Serial No. 09/460,293; copies of Notice of References cited in 09/460,293 (2 pages) (parts of papers 7 and 12) and Notice of References Cited (PTO-892, part of Paper No. 11) (1 page) cited in Serial No. 08/825,559 and included in the filing of parent application Serial No. 10/052,005; copies of Substitute for Form 1449B/PTO (5 pages) cited in parent application 10/052,005; and copy of Form PTO/SB/08A (1 page) cited in parent application 10/052,005 (a total of 15 pages);

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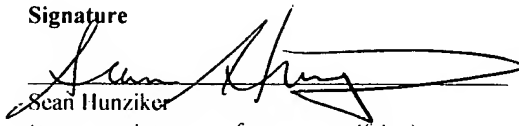
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Practitioner's Docket No. MPI96-031CP1DV1CPACN2M

3. (x) Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted.

Preliminary statements

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. section 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

**Identification of Prior Application in Which Listed Information Was Already Cited
and for Which No Copies Are Submitted or Need Be Submitted**

This application relies, under 35 U.S.C. section 120, on the earlier filing date of prior application Serial No. 10/052,005, filed on January 17, 2002.

The cited references were submitted to, and/or cited by, the Office in the prior application(s) and, therefore, are not required to be provided in this application. However, the undersigned will provide additional copies upon request.

March 26, 2004

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Subt. For, PTO-1449				Docket Number 103576.166		Application Number 09/460,293	
INFORMATION DISCLOSURE IN AN APPLICATION (Use several sheets if necessary)				Applicant Chen, Zhijian H.			
				Filing Date September 24, 1999		Group Art Unit 1652	
Sheet	1	OF	5				

U.S. Patent Documents						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

Foreign Patent Documents							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)	
A1	Alkalay, et al., "In Vitro Stimulation of I κ B Phosphorylation Is Not Sufficient to Activate NF- κ B", <i>Mol. Cell. Biol.</i> , Vol. 15, No. 3, pp. 1294-1304 (1995)
A2	Alkalay, et al., "Stimulation-Dependent I κ B- α Phosphorylation Marks the NF- κ B Inhibitor for Degradation via the Ubiquitin-Proteasome Pathway" <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 92, pp. 10599-10603 (1995)
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A4	Auffray, et al., "IMAGE: Integrated Molecular Analysis of the Human Genome and Its Expression" <i>Sciences</i> , Vol. 318, pp. 263-272 (1995)
A5	Auphan et al., "Immunosuppression by Glucocorticoids: Inhibition of NF- κ B Activity Through Induction of I κ B Synthesis" <i>Science</i> , Vol. 270, pp. 286-290 (1995)
A6	Baeuerle and Henkel, "Function and Activation of NF- κ B in the Immune System" <i>Annu. Rev. Immunol.</i> , Vol. 12, pp. 141-179 (1994)
A7	Baldi, et al., "Critical Role for Lysines 21 and 22 in Signal-Induced, Ubiquitin-Mediated Proteolysis of I κ B- α " Vol. 271, No. 1, pp. 376-379 (1996)
A8	Barroga et al., "Constitutive Phosphorylation of I κ B- α by Casein Kinase II" <i>Proc. Natl. Acad. Sci.</i> , Vol. 92, pp. 7637-7641 (1995)
A9	Beg, et al., "Tumor Necrosis Factor and Interleukin-1 Lead to Phosphorylation and Loss of I κ B- α : a Mechanism for NF- κ B Activation." <i>Mol. Cell. Biol.</i> pp. 3301-3310 (1993)
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A12	Brockman, J.A., "Coupling of a Signal Response Domain in I κ B- α to Multiple Pathways for NF- κ B Activation" <i>Mol. Cell. Biol.</i> , Vol. 15, No. 5 (1995)
A13	Brown, et al., "Control of I κ B- α Proteolysis by Site-Specific, Signal-Induced Phosphorylation" <i>Science</i> , Vol. 267, pp. 1485-1488 (1995)
A14	Chau, "A Multiubiquitin Chain is Confined to Specific Lysine in a Targeted Short-Lived Protein" <i>Science</i> , Vol. 243, pp. 1576-1583 (1989)

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Sheet	2	OF	5				

B1	Chen, et al., "Multiple Ubiquitin-Conjugating Enzymes Participate in the In Vivo Degradation of the Yeast MATa2 Repressor" <i>Cell</i> , Vol. 74, pp. 357-369 (1993)
B2	Chen, et al., "Signal-Induced Site-Specific Phosphorylation Targets I κ B- α to the Ubiquitin-Proteasome Pathway" <i>Genes and Dev.</i> , Vol. 9, pp. 1586-1597 (1995)
B3	Chen, et al., "Site-Specific Phosphorylation of I κ B- α by a Novel Ubiquitination-Dependent Protein Kinase Activity" <i>Cell</i> , Vol. 84 (1996)
B4	Chen and Pickart, "A 25-Kilodalton Ubiquitin Carrier Protein (E2) Catalyzes Multi-ubiquitin Chain Synthesis via Lysine 48 of Ubiquitin" <i>J. Biol. Chem.</i> , Vol. 265, No. 35, pp. 21835-21842 (1990)
B5	Choi, et al., "Ste5 Tethers Multiple Protein Kinases in the MAP Kinase Cascade Required for Mating in <i>S. cerevisiae</i> " <i>Cell</i> , Vol. 78, pp. 499-512 (1994)
B6	Ciechanover, "The Ubiquitin-Proteasome Proteolytic Pathway" <i>Cell</i> , Vol. 79, pp. 13-21 (1994)
B7	Derijard, et al., "Independent Human MAP Kinase Signal Transduction Pathways Defined by MEK and MKK Isoforms" <i>Science</i> , Vol. 267, pp. 682-685 (1995)
B8	Derijard, et al., "JNK1: A Protein Kinase Stimulated by UV Light and Ha-Ras That Binds and Phosphorylates the c-Jun Activation Domain" <i>Cell</i> , Vol. 76, pp. 1025-1037 (1994)
B9	Devary, et al., "NF- κ B Activation by Ultraviolet Light Not Dependent on a Nuclear Signal" <i>Science</i> , Vol. 261, pp. 1442-1445 (1993)
B10	Diaz-Meco, "ZPKC Induces Phosphorylation and Inactivation of I kappa B-alpha In Vitro" <i>EMBO J.</i> , Vol 13, No. 12, pp. 2842-2848 (1994)
B11	DiDonato, et al., "Phosphorylation of I κ B α Precedes but IS Not Sufficient for Its Dissociation from NF- κ B" <i>Mol. cell. Biol.</i> , Vol. 15, No. 3, pp. 1302-1311 (1995)
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B13	Finco, et al., "Inducible phosphorylation of I κ B α is not sufficient for its dissociation from NF- κ B and is inhibited by protease inhibitors" <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 91, pp. 11884-11888 (1994)
B14	Finco and Baldwin, "k κ B Site-Dependent Induction of Gene Expression by Diverse Inducers of Nuclear Factor k κ B Requires Raf-1", <i>J. Biol Chem.</i> , Vol. 268, No. 24, pp. 17676-17679 (1993)
B15	Finco and Baldwin, "Mechanistic Aspect of NF- κ B Regulation: The Emerging Role of Phosphorylation and Proteolysis" <i>Immunity</i> , Vol. 3, pp. 263-272 (1995)
B16	Francis and Corbin, "Structure and Function of Cyclic Nucleotide-dependent Protein Kinases" <i>Annu. Rev. Physiol.</i> , Vol. 56, pp. 237-72 (1994)
B17	Ghosh and Baltimore, "Activation Invitro of NF- κ B by Phosphorylation of its Inhibitor I κ B" <i>Nature</i> , Vol. 344, pp. 678-682 (1990)
B18	Goldberg, Alfred L., "Functions of the Proteasome: The Lysis at the End of the Tunnel" <i>Science</i> , Vol. 268, pp. 522-523 (1995)

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C1	Gupta, et al., "Transcription Factor ATF2 Regulation by the JNK Signal Transduction Pathway" <i>Science</i> , Vol. 267, pp. 389-393 (1995)
C2	Haskill, et al., "Characterization of an Immediate-Early Gene Induced in Adherent Monocytes that Encodes IκB-like Activity" <i>Cell</i> , Vol. 65, pp. 1281-1289 (1991)
C3	Henkel, et al., "Rapid Proteolysis of IκB-α is Necessary for Activation of Transcription Factor NF-κB" <i>Nature</i> , Vol. 365, pp. 182-185 (1993)
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C5	Hershko and Ciechanover, "The Ubiquitin System for Protein Degradation" <i>Annu. Rev. Biochem.</i> , Vol. 61, pp. 761-807 (1992)
C6	Hibi, et al., "Identification of an oncoprotein- and UV-responsive protein kinase that binds and potentiates the c-Jun activation domain" <i>Genes and Dev.</i> , Vol. 7, pp. 2135-2148 (1993)
C7	Higgins, et al., "Antisense inhibition of the p65 subunit of NF-κB blocks tumorigenicity and causes tumor regression" <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 90, pp. 9901-9905 (1993)
C8	Hirano, et al., "MEK Kinase Is Involved in Tumor Necrosis Factor α-Induced NF-κB Activation and Degradation of IκB-α" <i>J. Biol. Chem.</i> , Vol. 271, No. 22, pp. 13234-13238 (1996)
C9	Kumar, A., et al., "Double-Stranded RNA-Dependent Protein Kinase Activates Transcription Factor NF-κB by Phosphorylating IκB" <i>Proc. Natl. Acad. Sci. USA</i> Vol. 91, pp. 6288-6292 (1994)
C10	Kuno, et al., "Identification of an IκB-α - Associated Protein Kinase in a Human Monocytic Cell Line and Determination of its Phosphorylation Sites on IκB-α" <i>Biol. Chem.</i> Vol. 270, No. 46, pp. 27914-27919 (1995)
C11	Lange-Carter, et al., "A Divergence in the MAP Kinase Regulatory Network Defined by MEK Kinase and Raf" <i>Science</i> , Vol. 260, pp. 315-319 (1993)
C12	Li and Sedivy "Raf-1 Protein Kinase Activates the NF-κB Transcription Factor By Disassociating the Cytoplasmic NF-κB-IκB complex" <i>Proc Natl Acad Sci USA</i> , Vol. 90, pp. 9247-9251 (1993)
C13	Lin, et al., "Activation of NF-κB requires proteolysis of the inhibitor IκB-α: Signal-induced phosphorylation of IκB-α alone does not release active NF-κB" <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 92, pp. 552-556, (1995)
C14	Lin and Desiderio, "Regulation of V(D)J Recombination Activator Protein RAG-2 by Phosphorylation" <i>Science</i> , Vol. 260, pp. 953-959 (1993)
C15	Mellits, et al., "Proteolytic degradation of MAD3 (IκBα) and enhanced processing of the NF-κB precursor p105 are obligatory steps in the activation of NF-κB" <i>Nucl. Acid. Res.</i> , Vol. 21, No. 22, pp. 5059-5066 (1993)
C16	Miyamoto, et al., "Tumor necrosis factor α-induced phosphorylation of IκBα is a signal for its degradation but not dissociation from NF-κB" <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 91, pp. 12740-12744 (1994)

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D1	Nishizawa, M., et al., "Degradation of MOS by the N-terminal Proline-(Pro2)-Dependent Ubiquitin Pathway on Fertilization of Xenopus Eggs: Possible Significance of Natural Selection for Pro2 in MOS" <i>EMBO J.</i> , Vol. 12, No. 10, pp. 4021-4027 (1993)
D2	Palombella, et al., "The Ubiquitin-Proteasome Pathway is Required For Processing the NF- κ B1 Precursor Protein and the Activation of NF- κ B" <i>Cell</i> , Vol. 78, pp. 773-785 (1994)
D3	Pawlak, et al., "Characterization of a Large Population of mRNAs From Human Testis" <i>Genomics</i> , Vol. 26, pp. 151-158 (1995)
D4	Pickart and Rose, "Functional Heterogeneity of Ubiquitin Carrier Proteins" <i>J. Biol. Chem.</i> , Vol. 260, No. 3, pp. 1573-1581 (1985)
D5	Read, et al., "The Proteasome Pathway Is Required for Cytokine-Induced Endothelial-Leukocyte Adhesion Molecule Expression" <i>Immunity</i> , Vol. 2, pp. 493-506 (1995)
D6	Rodriguez, M.S., et al, "Inducible Degradation of I κ B α In Vitro and In Vivo Requires the Acidic C-Terminal Domain of the Protein" <i>Mol. Cell. Biol.</i> , Vol. 15(5), pp. 2413-2419 (1995)
D7	Scherer, et al., "Signal-Induced Degradation of I κ B- α requires site-specific Ubiquitination" <i>Natl. Acad. Sci. USA.</i> , Vol. 92, pp. 11259-11263 (1995)
D8	Schreck, et al., "Reactive Oxygen Intermediates as Apparently Widely Used Messengers in the Activation of the NF- κ B Transcription Factor and HIV-1" <i>EMBO J.</i> , Vol. 10 No. 8, pp. 2247-2258 (1991)
D9	Schutze, et al., "TNF Activates NF-kappa B by Phosphatidylcholine-Specific Phospholipase C-Induced "Acidic" Sphingomyelin Breakdown" <i>Cell</i> , Vol. 71 pp.765 -777
D10	Siebenlist, et al., "Structure, Regulation and Function of NF- κ B" <i>Annu. Rev. Cell Biol.</i> , Vol. 10, pp. 405-455 (1994)
D11	Sun, et al., "NF- κ B Controls Expression of Inhibitor I κ B- α : Evidence For An Inducible Autoregulatory Pathway", <i>Science</i> , Vol. 259, pp. 1912-1915 (1993)
D12	Thanos and Maniatis, "NF- κ B: A Lesson in Family Values" <i>Cell</i> , Vol. 80, pp. 529-532 (1995)
D13	Thévenin, et al., "Induction of Nuclear Factor- κ B and the Human Immunodeficiency Virus Long Terminal Repeat by Okadaic Acid, A Specific Inhibitor of Phosphatases 1 and 2A" <i>New Biol.</i> , Vol. 2, pp. 793-800 (1990)
D14	Traenckner et al., "A Proteasome Inhibitor Prevents Activation of NF- κ B and Stabilizes a Newly Phosphorylated Form of I κ B- α That is Still Bound to NF- κ B" <i>EMBO J.</i> , Vol. 13, pp.5433-5441 (1994)
D15	Traenckner, E.B.-M., et al, "Phosphorylation of Human I κ B- α on Serines 32 and 36 Controls I κ B- α Proteolysis and NF- κ B Activation in Response to Diverse Stimuli" <i>EMBO J.</i> , Vol. 14, No. 12, pp. 2876-2883 (1995)
D16	Verma, et al., "Rel/NF- κ B/I κ B Family: Intimate Tales of Association and Disassociation" <i>Genes and Dev.</i> , Vol. 9 pp. 2723-2735 (1995)
D17	Wasserman, "A Conserved Signal Transduction Pathway Regulating the Activity of the Rel-Like Proteins Dorsal and NF- κ B" <i>Mol. Biol. Cell.</i> , Vol. 4, pp. 767-771 (1993)

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E1	Whiteside, et al., "N- and C- Terminal Sequences Control Degradation of MAD3/I κ B- α in Response to Inducers of NF- κ B Activity" <i>Mol. Cell. Biol.</i> , Vol. 15, No. 10, pp. 5339-5345 (1995)
E2	Yaglom, et al., "p34Cdc28-Mediated Control of Cln3 Cyclin Degradation" <i>Mol. Cell. Biol.</i> , Vol. 15, No. 2, pp. 731-741 (1995)
E3	Yang, et al., "Deficient signaling in mice devoid of double-stranded RNA-dependent Protein kinase" <i>EMBO J.</i> , Vol. 14, No. 24, pp. 6095-6106 (1995)
E4	EMBL Database entry Hs369288, Accession Number N56369, from International Search Report, International Application No. PCT/US97/04195
E5	EMBL Database entry Hs2038, Accession Number T19203, from International Search Report, International Application No. PCT/US97/04195

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U.S. Patent Documents						
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	5,972,674	10/26/99	Mercurio, et al.	435	194	
	6,258,579	7/10/01	Mercurio, et al.	435	194	
	6,268,194	7/31/01	Karin, et al.	435	194	
	6,242,253	6/5/01	Karin, et al.	435	325	

Foreign Patent Documents							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	98/08955	3/5/98	WO				
	98/37228	8/27/98	WO				

		Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)
		Lee et al. "Activation of the I κ B α Kinase Complex by MEKK1, a Kinase of the JNK Pathway" <i>Cell</i> , Vol. 88, pp. 213-222 (1997)

EXAMINER	DATE CONSIDERED
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NOTICE OF REFERENCES CITED								
				APPLICANT(S) : Chen, et al.				
U.S. PATENT DOCUMENTS								
*		DOCUMENT NUMBER	DATE	NAME(S)	CLASS	SUBCLASS	FILING DATE	
FOREIGN PATENT DOCUMENTS								
*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS	PERTINENT DRW SPEC
*		OTHER REFERENCES (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)						
	A	Tamaoki, T, et al. (1996) Biochem. Biophys. Res. Commun. 135(2), 397-402.						
	B	Kase, H., et al. (1987) Biochem. Biophys. Res. Commun. 142(2), 436-440,						
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Charles L. Patterson, Jr.		2/27/01		PAGE 1 OF 1				

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Application/Control No.

09/406,293

Applicant(s)/Patent Under

Reexamination

CHEN, ZHIJIAN J.

Examiner

Charles L. Patterson, Jr.

Art Unit

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Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
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	P					
	Q					
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	S					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Segel, I.H. (1975) Enzyme Kinetics, pages 89-96
	V	
	W	
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Application No.

08/825,559

Applicant(s)

Chen

Examiner

Nolan

Group Art Unit

1644

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NON-PATENT DOCUMENTS

*		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U		Connelly et al. Cell. + Molecular Bio. Res. Vol. 41: 537-549 1975	6-95
V		Regnier et al. Cell. Vol. 90: 373-383, 1977	7-77
W			
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/052,005
		Filing Date	January 17, 2002
		First Named Inventor	Chen, Zhijian J.
		Group Art Unit	1652
		Examiner Name	Patterson, Charles, L., Jr.
Sheet	1	of	5
		Attorney Docket Number	MPI96-031CP1DV1CPACN1M

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Examiner Initials*	Cite No. ¹	Include the name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and-or country where published.	T ²
	A3	Arason, T. and Ellison, M.J., "Stress resistance in <i>Saccharomyces cerevisiae</i> is strongly correlated with assembly of a novel type of multiubiquitin chain", <i>Molecular and Cell Biology</i> , Volume 14, Number 12, pages 7876-7883 (1994)	
	A5	Auphan, N., et al., "Immunosuppression by Glucocorticoids: Inhibition of NF-kB Activity Through Induction of Ikb Synthesis" <i>Science</i> , Volume 270, pages 286-290 (1995)	
	A6	Baeuerle, P. and Henkel, T., "Function and Activation of NF-kB in the Immune System", <i>Annual Review of Immunology</i> , Volume 12, pages 141-179 (1994)	
	A11	Blank, J., et al., "Molecular Cloning of Mitogen-activated Protein/ERK Kinase Kinases (MEKK) 2 and 3", <i>The Journal of Biological Chemistry</i> , Volume 271, Number 10, pages 5361-5368 (1996)	
	B1	Chen, P., et al., "Multiple Ubiquitin-Conjugating Enzymes Participate in the In Vivo Degradation of the Yeast MAT α 2 Repressor", <i>Cell</i> , Volume 74, pages 357-369 (1993)	
	B4	Chen, Z., et al., "A 25-Kilodalton Ubiquitin Carrier Protein (E2) Catalyzes Multiubiquitin Chain Synthesis via Lysine 48 of Ubiquitin", <i>The Journal of Biological Chemistry</i> , Volume 265, Number 35, pages 21835-21842 (1990)	
	B5	Choi, K., et al., "Ste5 Tethers Multiple Protein Kinases in the MAP Kinase Cascade Required for Mating in <i>S. cerevisiae</i> ", <i>Cell</i> , Volume 78, pages 499-512 (1994)	
	B7	Derijard, B., et al., "Independent Human MAP Kinase Signal Transduction Pathways Defined by MEK and MKK Isoforms" <i>Science</i> , Volume 267, pages 682-685 (1995)	
	B8	Derijard, B., et al., "JNK1: A Protein Kinase Stimulated by UV Light and Ha-RAS That Binds and Phosphorylates the c-Jun Activation Domain", <i>Cell</i> , Volume 76, pages 1025-1037 (1994)	
	B11	DiDonato, J., et al., "Phosphorylation of Ikb α Precedes but Is Not Sufficient for Its Dissociation from NF-kB", <i>Molecular and Cellular Biology</i> , Volume 15, Number 3, pages 1302-1311 (1995)	

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		Filing Date	January 17, 2002
		First Named Inventor	Chen, Zhijian J.
		Group Art Unit	1652
		Examiner Name	Patterson, Charles L., Jr.
Sheet	2	of	5
		Attorney Docket Number	MPI96-031CP1DV1CPACN1M

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	B13	Finco, T., et al., "Inducible phosphorylation of Ikb α is not sufficient for its dissociation from NF-kB and is inhibited by protease inhibitors", Proceedings of the National Academy of Sciences USA, Volume 91, pages 11884-11888 (1994)	
	B15	Finco, T., et al., "Mechanistic Aspects of NF-kB Regulation: The Emerging Role of Phosphorylation and Proteolysis", Immunity, Volume 3, pages 263-272 (1995)	
	B16	Francis, S. and Corbin, D., "Structure and Function of Cyclic Nucleotide-Dependent Protein Kinases" Annual Review of Physiology, Volume 56, pages 237-272 (1994)	
	B18	Goldberg, A., "Functions of the Proteasome: The Lysis at the End of the Tunnel", Science, Volume 268, pages 522-523 (1995)	
	C1	Gupta, S., et al., "Transcription Factor ATF2 Regulation by the JNK Signal Transduction Pathway", Science, Volume 267, pages 389-393 (1995)	
	C2	Haskill, S., et al., "Characterization of an Immediate-Early Gene Induced in Adherent Monocytes That Encodes Ikb-like Activity", Cell, Volume 65, pages 1281-1289 (1991)	
	C4	Hershko, A. and Heller, H., "Occurrence of a Polyubiquitin Structure in Ubiquitin-Protein Conjugates", Biochemical and Biophysical Research Communications, Volume 128, Number 3, pages 1079-1086 (1985)	
	C6	Hibi, M., et al., "Identification of an oncoprotein- and UV-responsive protein kinase that binds and potentiates the c-Jun activation domain" Genes and Development, Volume 7, pages 2135-2148 (1993)	
	C7	Higgins, K., et al., "Antisense inhibition of the p65 subunit of NF-kB blocks tumorigenicity and causes tumor regression", Proceedings of the National Academy of Sciences USA, Volume 90, pages 9901-9905 (1993)	

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		Application Number	10/052005		
		Filing Date	January 17, 2002		
		First Named Inventor	Chen, Zhijian J.		
		Group Art Unit	1652		
		Examiner Name	Patterson, Charles L., Jr.		
Sheet	3	of	5	Attorney Docket Number	MPI96-031CP1DV1CPACN1M

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include the name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and-or country where published.	T ²
	C6	Hirano, M., et al., "MEK Kinase Is Involved in Tumor Necrosis Factor α -Induced NF- κ B Activation and Degradation of I κ B- α ", The Journal of Biological Chemistry, Volume 217, Number 22, pages 13234-13238 (1996)	
	C11	Lange-Carter, C.A., et al., "A Divergence in the MAP Kinase Regulatory Network Defined by MEK Kinase and Raf", Science, Volume 260, pages 315-319 (1993)	
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	D5	Read, M.A., et al., "The Proteasome Pathway is Required for Cytokine-Induced Endothelial-Leukocyte Adhesion Molecule Expression", Immunity, Volume 2, pages 493-506 (1995)	
	D10	Siebenlist, U., et al., "Structure, Regulation and Function of NF- κ B", Annual Review of Cell Biology, Volume 10, pages 405-455 (1994)	
	D12	Thanos, D. and Maniatis, T., "NF- κ B: A Lesson in Family Values", Cell, Volume 80, pages 529-532 (1995)	
	D13	Thevenin, C., et al., "Induction of Nuclear Factor- κ B and the Human Immunodeficiency Virus Long Terminal Repeat by Okadaic Acid, a Specific Inhibitor of Phosphatases 1 and 2A", New Biologist, Volume 2, Number 9, pages 793-800 (1990)	

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		Filing Date	January 17, 2002
		First Named Inventor	Chen, Zhijian J.
		Group Art Unit	1652
		Examiner Name	Patterson, Charles L., Jr.
		Attorney Docket Number	MPI96-031CP1DV1CPACN1M
Sheet	4	of	5

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	D15	Traenckner, E.B., et al., "Phosphorylation of Human IκB-α on Serines 32 and 36 Controls IκB-α Proteolysis and NF-κB Activation in Response to Diverse Stimuli", The EMBO Journal, Volume 14, Number 12, pages 2876-2883 (1995)	
	E3	Yang, Y.-L., et al., "Deficient signaling in mice devoid of double-stranded RNA-dependent protein kinase", The EMBO Journal, Volume 14, Number 24, pages 6095-6106 (1995)	
	F1	Xu, S., et al., "Cloning of rat MEK kinase 1 cDNA reveals an endogenous membrane-associated 195-kDa protein with a large regulatory domain", Proceedings of the National Academy of Sciences USA, Volume 93, pages 5291-5295 (1996)	
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	F3	DiDonato, J.A., et al., "A Cytokine-responsive IκB kinase that Activates the Transcription Factor NF-κB", Nature, Volume 388, pages 548-554 (August 1997)	
	F4	Miller, B.S. and Zandi, E., "Complete Reconstitution of Human IκB Kinase (IKK) Complex in Yeast", The Journal of Biological Chemistry, Volume 276, Number 39, pages 36320-36326 (September 28, 2001)	
	F5	Fu, D.-X., et al., "Human T-lymphotropic Virus Type I Tax Activates I-κB Kinase by Inhibiting I-κB Kinase-associated Serine/Threonine Protein Phosphatase 2A", The Journal of Biological Chemistry, Volume 278, Number 3, pages 1487-1493 (January 17, 2003)	
	F6	Storz, P. and Toker, A., "Protein kinase D mediates a stress-induced NF-κB Activation and Survival Pathway", The EMBO Journal, Volume 22, Number 1, pages 109-120 (2003)	
	F7	Yang, J., et al., "The Essential Role of MEKK3 in TNF-induced NF-κB Activation", Nature Immunology, Volume 2, Number 7, pages 620-624 (July 2000)	

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		Filing Date	January 17, 2002
		First Named Inventor	Chen, Zhijian J.
		Group Art Unit	1652
		Examiner Name	Patterson, Charles L., Jr.
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		Attorney Docket Number	MP196-031CP1DV1CPACN1M

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	F8	Zhao, Q. and Lee, F.S., "Mitogen-activated Protein Kinase/ERK Kinase Kinases 2 and 3 Activate Nuclear Factor-kB through IκB Kinase-α and IκB Kinase-β", The Journal of Biological Chemistry, Volume 274, Number 13, pages 8355-8358 (March 26, 1999)	
	F9	Tojima, Y., et al., "NAK is an IκB kinase-activating kinase", Nature, Volume 404, pages 778-782 (April 13, 2000)	
	F10	Wang, C., et al., "TAK1 is a Ubiquitin-dependent kinase of MKK and IKK", Nature, Volume 412, pages 346-351 (July 19, 2001)	
	F11	Regnier, C.H., et al., "Identification and Characterization of an IκB Kinase", Cell, Volume 90, pages 373-383 (July 25, 1997)	
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				Filing Date	January 17, 2002
				First Named Inventor	Chen, Zhijian J.
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	S1	5,830,756		Chiron Corporation/University of North Carolina	11/03/1998	
	S2	6,576,437		Signal Pharmaceuticals, Inc.	06/10/2003	

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